

Barbara Sunderland & Associates, Inc.

A STUDY OF ATTITUDES TOWARD BIG ISLAND DEVELOPMENT ISSUES

Presented to:

Patti Cook and Associates, Inc.

Presented by:

Barbara Sunderland & Associates, Inc.

September, 1987

Barbara Sunderland & Associates, Inc.

September 30, 1987

Ms. Patti Cook
President
Patti Cook & Associates
1088 Bishop Street, #1227
Honolulu, HI 96813

Dear Ms. Cook,

We are pleased to present our report entitled "A STUDY OF ATTITUDES TOWARD BIG ISLAND DEVELOPMENT ISSUES."

It's been our pleasure to play a role in your pending communications and issues management program. I hope that the information we have uncovered will prove helpful to you in focusing your professional efforts and we wish you every success in developing further community support for the project proposals.

Again, my thanks for choosing my company to do the research. I enjoyed working with your firm and appreciate the counsel and support you provided. I'm grateful as well to Elliot Pulham for his guidance throughout the project.

Very truly yours,

Barbara L. Sunderland
President

TABLE OF CONTENTS

BACKGROUND AND PURPOSE.....	1
APPROACH AND METHODOLOGY.....	4
EXECUTIVE SUMMARY.....	9
DISCUSSION OF FINDINGS	
I. Overview of Attitudes Toward Various Growth Issues.....	14
II. Sources of Information About Local Issues.....	21
III. Awareness of and Attitudes Toward the Proposed Space Launch and Tropical Agriculture Irradiation Facilities.....	26
IV. Likelihood of Altering the Opinions of Project Opponents.....	59
DEMOGRAPHIC CHARACTERISTICS OF SURVEY RESPONDENTS.....	
	78
APPENDIX	
Copy of Questionnaire	

BACKGROUND AND PURPOSE

When Patti Cook & Associates established a consulting relationship with the State Department of Business & Economic Development, one of the prime tasks for the public relations and marketing firm was to promote support for development of new technologies and technology related facilities on the Big Island of Hawaii. This was to be tackled via measures aimed at improving community awareness of the benefits to be gained and through a professional program of issues management.

Among the proposals backed by state government are development of geothermal resources, development of space related activities and construction of an irradiation plant for tropical agriculture commodities. Although advocates believe these activities will enhance Hawaii's economy and provide new opportunities for growth, detractors with an opposing view, point to perceived "dangers" in the facilities themselves as well as "threats" to existing lifestyles.

Before Cook & Associates launched its communications effort, it was deemed essential to take a look at current attitudes toward the ventures, not only within Hawaii County but throughout the state. Thus the firm commissioned Barbara Sunderland & Associates, Inc., to undertake a statewide telephone survey of island residents.

The survey was aimed at determining how informed people feel about the development proposals, how widespread support is at present, what specific concerns will need to be addressed in Cook & Associates' educational program and how opposition to the projects might be most appropriately addressed.

The questionnaire for the study was designed by the research firm, in consultation with the client and with DBED personnel. Among the topic areas covered were the following:

- √ How residents feel, in general, about economic growth in Hawaii versus keeping things as they are now.
- √ Should development decisions be made by residents of an affected area or by all citizens.

- √ The respondent's single most important source of news and information about local events and activities.
- √ How informed people feel about proposals for a space facility in Ka'u and the irradiation plant in Hilo; whether they favor or oppose the projects; reasons given for opposition and whether those who are against the ventures might change their minds if they were given additional information to allay some of the major concerns that have been expressed.
- √ Whether residents favor or oppose geothermal development on the Big Island and additional hotels and resorts in its Kona-Kohala district.
- √ Attitudes toward C. Brewer & Co., Ltd. (which has offered to donate a parcel of land for the spaceport).
- √ Demographic characteristics of survey respondents including age, sex, ethnicity, annual household income, duration of residency in Hawaii, educational level attained, whether a household member is employed in tourism, agriculture or real estate development and whether or not the household contains a union member.

APPROACH AND METHODOLOGY

This report section provides a detailed description of the methods used to gather and analyze the study data. It describes the reliability of the sample, our procedures for training and supervising interviewers, the disposition of telephone dialings and the data processing activities.

Sample Size

To gather the information desired, a telephone survey of residents was conducted among male and female adults in 800 households. Four-hundred interviews were completed on the Big Island (the critical area of interest), 200 were done on Oahu (the major population center) and 100 each were conducted on Kauai and Maui County.

The sampling strategy results in findings with a statistical reliability of plus or minus five percentage points at the 95 percent level of confidence for the Big Island. This means that if we drew 100 independent samples from the same population, and conducted the interviewing in precisely the same manner each time, that 95 times out of 100 we would obtain results within five percent of what our survey reveals. The sample error figure for the City and County of Honolulu is plus or minus seven percent; for Maui and Kauai, it's ten percent.

For the analysis, each subsample was weighted according to household population within the counties. Therefore, where the data are shown for the state as a whole, the standard error is 5.5 percent.

The survey sample was drawn through the use of a computer program which generated random telephone numbers for each of the four island counties including new listings and unlisted or unpublished residences as well as those found in the directories. The program produces numbers by prefix in the same proportion as those that are actually in use; that is if x percent of numbers on Oahu begin with 293-, then x percent of those in our sample start with that exchange.

Interviewing Methods

All interviewing for the project was conducted from Sunderland & Associates' in-house calling center which offers continuously supervised field work to ensure that all professional standards are adhered to. The field director on duty was equipped with an electronic device that enabled her to monitor calls in progress and to respond immediately to any problems or misunderstandings encountered. She also checked and evaluated all completed interviews on a regular basis to make sure that responses were recorded exactly as instructed.

The questionnaire used for the research was designed by Sunderland & Associates and approved by the client. (A copy is included in the Appendix to this report). All interviewers selected for the project were experienced professionals, skilled in the techniques of telephone surveying and adept at eliciting the information required. Nevertheless, they underwent a special training session in the use of this survey instrument.

(When questions were asked that involved putting forth arguments for and against the space launch and irradiation facility proposals, interviewers alternated the order, giving the supporters' side first in one interview and the opposition's position first for the next.)

Field work for the project was launched on August 21, 1987, and completed on September 2. Dialings were made from 5 to 9 p.m. weekdays and from 10 a.m. to 6 p.m. weekends. Up to four attempts were made to reach each household in the original sampling before a replacement was drawn, a technique that ensures coverage of households whose members are infrequently at home or who work unusual hours. Follow-up dialings were made at different times of the day and days of the week to enhance our ability to reach qualified respondents.

Survey Completion Rate

Nearly half of the dialings resulted in completed interviews. The table below shows, by county, the disposition of dialings.

DISPOSITION OF DIALINGS

	TOTAL		BIG ISLAND		OAHU		MAUI		KAUAI	
	(#)	(%)	(#)	(%)	(#)	(%)	(#)	(%)	(#)	(%)
interviews completed	800	45	400	48	200	45	100	41	100	41
no answer after four attempts	467	26	216	26	89	20	86	35	76	31
declined to participate	287	16	130	16	85	19	36	15	36	15
eligible respondent not home after four attempts	97	5	36	4	39	9	9	4	13	5
foreign speaking	84	5	41	5	17	4	9	4	17	7
recording device (four attempts)	39	2	14	2	18	4	4	2	3	1
total:	1,774	100	837	100	448	100	244	100	245	100

Of the 400 interviews completed on the Big Island, 63 percent were among households in East Hawaii (defined as the area from Laupahoehoe in the north to Naalehu in the south) and 37 percent in West Hawaii (from Paauilo to Honaunau). These percentages closely match census tract data which show the true proportions to be 64 percent of all resident households located on the east side of the island and 36 percent on the west.

The head of the household or spouse completed the interview in most cases (89 percent). Eleven percent of the time, when neither the male or female head of household was available, another family member 18 years of age or older was interviewed.

Processing of Data

Upon completion of the field work, questionnaires were edited by professional staff members for logic, clarity and adherence to procedures, ensuring that answers were properly recorded for each closed-ended question (those with predetermined categories of response) and that all skip patterns were observed. Numeric coding categories were developed and applied to the open-ended inquiries in which respondents' replies were taken down verbatim.

The data were then keypunched, verified and electronically processed to produce frequency distributions and crosstabulations of responses. These were then analyzed and the results are reported in the following pages.

EXECUTIVE SUMMARY

Residents of Oahu and the Big Island are the most growth oriented in the state, according to the results of this study. Maui and Kauai people aren't against growth, but they lag behind the two larger populations in their frequency of voicing approval for a number of the projects that the survey evaluated. But first, when a general question was posed about which was preferred for the state of Hawaii, economic growth or keeping things the way they are, Big Island residents voted two to one for growth, a majority on Oahu favored it too, and close to 50 percent on Maui and Kauai also thought that economic growth was a better alternative than the status quo.

Most people around the state favor development of the geothermal resource on the Big Island, and there's majority approval in every county, too, for extensive resort development on the Kona/Kohala coast. Statewide, 60 percent approve of the proposal to build a space launch facility at South Point and the most controversial project we asked about, the proposed commodities irradiation facility for Hilo, drew precisely an even split in public opinion -- 46 percent in favor, 46 percent opposed, and eight percent undecided.

Even in Hawaii county, where debate about the two projects has been heated, according to newspaper reports and letters to the editor, there is solid majority support for the launch site from both sides of the island. And attitudes toward the irradiation plant aren't terribly negative either. On the Kona side, opposition to irradiation stood at 52 percent against 39 percent in favor; on the Hilo side where the plant would be sited, the proposal drew 48 percent opposition and 43 percent approval -- a split that's really too close to call.

A slightly higher proportion of West Hawaii residents takes the negative side of any growth issue and that was true for the launch and irradiation proposals too. The differences were marginal ones though, just a matter of a few percentage points toward the opposing side for each issue.

Public knowledge of the launch facility proposed for Ka'u is more widespread -- both on the Big Island and in the rest of the state -- than knowledge of the fruit irradiation proposal. In fact, 51 percent of the residents interviewed statewide had their first exposure to the latter issue through the description we supplied in the

interview. Looking just at Hawaii island, though, nearly everyone possessed some information about the launch facility and a solid majority was aware of plans for the irradiation plant too.

Opposition to the Ka'u space facility was at the 30 percent level on Oahu, Maui and Kauai and at 39 percent on the Big Island. For the irradiation plant, it was 46 percent and 50 percent respectively. Many people were selective about their "votes," we found. A special calculation made from the printouts revealed that on the Big Island, 30 percent favor both proposals, 28 percent oppose both and the remaining 42 percent gave a mixed response. The same was true in the other counties. On Oahu, Maui and Kauai, 37 percent favor both, 21 percent oppose both and, again, 42 percent offered a combination of answers.

The people who are against the development of a launch facility most often base their disapproval on fears about environmental damage, saying that air and noise pollution would be a result of the activities there. Opponents to the irradiation plant principally worried about the radioactive materials that would be used, and talked about the dangers of radiation escaping into the surroundings.

Roughly half of the opponents to each project said that they were open to new information, and that their minds could be changed if there was evidence presented to allay their concerns. Of the different messages that the questionnaire tested, however, most were effective among only a third or fewer of the opponents. Quite a number of the respondents said they lack confidence in the information the public receives from government about such matters.

Oahu residents reported that the daily newspapers and television news are their main sources of information about issues such as those examined in this survey. On the Neighbor Islands, though, the role of community newspapers is critical. On the Big Island, we found the combined readership for the Hawaii Tribune-Herald and West Hawaii Today to exceed the proportion who named television as their primary source of news about issues, and those papers were clearly the way the majority had learned about the launch and irradiation facilities.

When we examined how to reach the project opponents who live on the Big Island, the dominant information source for people who say they're open to changing their minds is the Hawaii Tribune-Herald.

These findings and others are discussed in detail in the body of this report.

I. Overview of Attitudes Toward Various Growth Issues

This first report section presents an overview of Hawaii residents' attitudes toward various growth issues that the questionnaire asked about. Even though the principal focus of the survey was on the proposed launch site and fruit irradiation facility, inquiries about economic growth in general, and other developments being considered or under way on the Big Island were included, to see if the current tone of public opinion is generally pro- or anti-development.

Table 1, below, is a summary of response to each of the growth-related topics that the questionnaire explored. They are presented in descending order by the proportion, statewide, that voiced approval of each one:

TABLE 1
PERCENT OF EACH COUNTY'S RESIDENTS
WHO FAVOR VARIOUS GROWTH ISSUES

percent that favors...	total statewide weighted (%)	Big Island (%)	Oahu (%)	Maui (%)	Kauai (%)
geothermal	84	77	87	73	86
Kona/Kohala resort development	66	74	67	58	50
launch facility	60	54	63	48	55
statewide decisions about projects on one island	54	36	59	37	36
economic growth for the state	53	68	52	46	49
irradiation facility	46	42	47	41	39
base:	[800]	[400]	[200]	[100]	[100]

The figures on the previous page document that resident opinion is on the side of support for most of the issues; the only one where less than a majority was in favor was the proposed agriculture commodities irradiation facility for Hilo. But even that was clearly not one-sided. Statewide, 46 percent support the building of the plant but as a later table will show, opposition stood at a precisely equal 46 percent too, with the remainder being undecided about it.

Residents of the Big Island are among the most growth-oriented of all the state's people. In response to a question asking which was favored, "economic growth for our islands," or "keeping things the way they are now," two out of three Big Island households said they'd opt for economic growth -- the largest proportion of all the counties. Big Island residents also support the development of geothermal energy on their island (77 percent favor it), development of the Kona/Kohala Coast as a resort destination (74 percent) and the building of the space launch facility (54 percent).

Only a minority of Big Islanders, however, supports the irradiation plant (42 percent). And in response to our question about who should have the final say about a project, the people in the area most affected by it or all the people in the state, Big Island residents are strongly on the side of home rule (as is true on Maui and Kauai too). Only 36 percent of the Big Island residents thought that the state as a whole should decide about developments in individual counties.

The remaining six tables in this section show detailed responses to each inquiry that was summarized on the previous table. This time, though, we take a closer look at the island of Hawaii in the crosstabulations, evaluating the attitudes by whether respondents live on the east side or on the west.

TABLE 2

**ATTITUDES TOWARD THE DEVELOPMENT OF GEOTHERMAL ENERGY
ON THE BIG ISLAND BY GEOGRAPHIC AREA OF RESIDENCE**

	total statewide weighted (%)	West Hawaii (%)	East Hawaii (%)	remainder of state (%)
favor geothermal development	84	75	78	85
oppose it	7	16	12	6
don't know	9	5	10	9
base:	[800]	[149]	[251]	[400]

Not surprisingly, about the only opposition to geothermal development that warrants mention comes from Big Island residents, and even then it's fewer than 20 percent who are against it (16 percent oppose it on the Kona side; 12 percent on the Hilo side). Statewide, 84 percent favor geothermal, seven percent oppose it and nine percent had no opinion in the matter.

Across the state, about two out of every three residents think that the resort development in Kona-Kohala is a good thing. The question asked was:

"The west coast of the Big Island is slated for extensive hotel and resort development in the Kona-Kohala district. In general do you favor or oppose resort development there?" Responses follow:

TABLE 3

**ATTITUDES TOWARD THE RESORT DEVELOPMENT IN KONA/KOHALA
BY GEOGRAPHICAL AREA OF RESIDENCE**

	total statewide weighted (%)	West Hawaii (%)	East Hawaii (%)	remainder of state (%)
favor it	66	68	78	65
oppose it	24	28	18	24
don't know	10	4	4	11
base:	[800]	[149]	[251]	[400]

As shown, Hilo area residents favor it the most; those in closest proximity favor it the least. Nevertheless, a solid 68 percent majority of residents of West Hawaii, too, voted on the side of the resort development.

Big Island people are just slightly less apt to support the proposed launch facility at South Point than residents of other counties.

TABLE 4
FEEL ABOUT LAUNCH FACILITY BY GEOGRAPHIC AREA OF RESIDENCE

	total statewide weighted (%)	West Hawaii (%)	East Hawaii (%)	remainder of state (%)
favor it	60	51	55	61
oppose it	31	44	37	30
don't know/ no opinion	9	5	8	9
base:	[800]	[149]	[251]	[400]

As shown above, opposition to the launch site was voiced more often by the people living on the west side of the island where 44 percent took issue with its development. For the state as a whole, six out of ten people support it.

Early in the survey interview the following question was posed:

"Suppose we have to decide whether to have a project in a particular area of one island, and that project is one that is likely to benefit everyone in the state. Who should decide whether or not the project should be built -- the people who live in that area, or all the people throughout the state?"

Even though this question was asked prior to respondents' knowledge of which island our inquiries would focus on, it's clear that Neighbor Island people are significantly more likely to want the final say in any project that is built close to home. As an earlier table showed (Table 1), only about a third of the Neighbor Islanders voted on the side calling for all people in the state to have a say, whereas nearly six out of ten Oahu residents believe in statewide decisions about projects.

Below we show responses to the same question, broken out by East and West Hawaii versus the rest of the state:

TABLE 5
WHO SHOULD DECIDE WHETHER A PROJECT SHOULD BE BUILT
BY GEOGRAPHICAL AREA OF RESIDENCE

	total statewide weighted (%)	West Hawaii (%)	East Hawaii (%)	remainder of state (%)
all residents statewide	54	32	38	55
people in area most affected	44	64	57	42
don't know	3	3	5	3
base:	[800]	[149]	[251]	[400]

In comparing answers from the two sides of the Big Island we see just a small difference between West and East Hawaii. Both are strongly on the side of home rule, and an even larger majority from the Kona-Kohala Coast feels that way.

Public opinion in Hawaii now favors economic growth, according to these survey results. And Big Island people are more growth oriented than any others throughout the state:

TABLE 6
ATTITUDES TOWARD GROWTH BY GEOGRAPHICAL AREA OF RESIDENCE

	total statewide weighted (%)	West Hawaii (%)	East Hawaii (%)	remainder of state (%)
favor economic growth	53	65	69	52
favor keeping things the way they are now	40	30	26	41
don't know/depends on quality of growth	7	5	6	7
base:	[800]	[149]	[251]	[400]

In an earlier table we saw that the Big Island was the only Neighbor Island where a majority opted for growth when faced with that choice against "keeping things the way they are now." (Our printouts show that on Maui and Kauai there wasn't a majority on either side; 40-some percent were pro-growth, 40-some percent were anti-growth and about 10 percent said they were uncertain, it depended on the quality of growth that occurs.)

Public attitudes toward the proposed irradiation facility at Hilo couldn't be more evenly split. For the state as a whole, 46 percent favor building the plant, 46 percent oppose it and eight percent said they weren't knowledgeable enough about it to have formed an opinion.

TABLE 7

FEEL ABOUT IRRADIATION FACILITY BY GEOGRAPHIC AREA OF RESIDENCE

	total statewide weighted (%)	West Hawaii (%)	East Hawaii (%)	remainder of state (%)
favor it	46	39	43	46
oppose it	46	52	48	46
don't know	8	9	9	8
base:	[800]	[149]	[251]	[400]

Interestingly, Big Island votes on this issue were not vastly different from feeling throughout the state. As the figures above reveal, only a slight majority of West Hawaii residents (52 percent) said they are against building the facility, 39 percent favor it and nine percent are undecided. On the Hilo side, where the plant will be sited, there was not a majority either way, and the resulting split is too close to call. A 48 percent plurality told us they oppose the irradiation plant, a very close 43 percent favor it and there, too, nine percent had not made up their minds about it.

II. Sources of Information About Local Issues

To launch an effective information campaign about proposed developments for the Big Island, it is essential to learn where people there and elsewhere in the state obtain information about public policy issues. The findings in this report section address where residents turn for information about local events.

Table 8, below, shows that across the state, television and the daily Honolulu newspapers are at near parity as sources of information about local events. Forty-three percent said that the TV news is their primary source and 37 percent named a daily paper published in Honolulu. Radio is in a very distant third place at eight percent, tied with the summed response for community newspapers. A small handful -- three percent -- said that talking with others is the way they learn about what is going on locally.

TABLE 8
MOST IMPORTANT SOURCE OF INFORMATION ABOUT LOCAL EVENTS
BY COUNTY OF RESIDENCE

	total statewide weighted (%)	Big Island (%)	Oahu (%)	Maui (%)	Kauai (%)
television	43	36	43	48	43
Honolulu dailies	37	7	45	11	13
radio	8	8	8	11	12
community paper	4	0	2	24	31
Hawaii Tribune-Herald	3	34	0	0	0
West Hawaii Today	1	10	0	0	0
friends/neighbors/meetings	3	5	3	6	1
base:	[800]	[400]	[200]	[100]	[100]

When we look at the Neighbor Islands separately though, we see that community papers there play a critical role in disseminating information about local happenings. And on the Big Island in particular, combined mentions of the two local papers, the Hawaii Tribune-Herald and West Hawaii today, was 44 percent (the Tribune-Herald appears to have roughly three times the readership of West Hawaii Today) against the 36 percent who named television as their primary source of information.

As the figures on the previous page reveal, dependence upon news from the Honolulu papers is pretty limited in the Neighbor Island counties. Only seven percent of the Big Islanders named the Advertiser or Star-Bulletin as their primary source of news about local events. On Maui and Kauai, 11 and 13 percent respectively cited a Honolulu paper.

The two tables to follow -- Tables 9 and 10 -- show the responses people gave when asked how they had learned about proposals for the launch facility at Ka'u and the irradiation plant at Hilo. (The reader should note that the bases on those tables exclude a portion of the population since not everyone interviewed had heard that these developments were being considered.)

The figures document that a majority of the Big Islanders aware of the projects got their news about them from the Hawaii Tribune-Herald. Television news was the secondary source and word of mouth was fairly important too, cited by about one out of five. A like number, about 20 percent, had read about the two proposals in West Hawaii Today.

For the rest of the state, reading articles in the Honolulu dailies about the launch site and fruit irradiation facility topped the list of information sources, followed closely by televised reports about them.

The category labeled "all other places" included mentions of community meetings, leaflets, working in the papaya industry, Mainland news magazines and a number of other information sources. No single one was named by more than a small handful of people, however.

TABLE 9

**WHERE PEOPLE LEARNED ABOUT LAUNCH SITE
BY GEOGRAPHIC AREA OF RESIDENCE**

	total statewide weighted (%)	Big Island (%)	rest of state (%)
Honolulu daily newspapers	63	14	71
television news reports	55	38	57
word of mouth	18	21	17
radio	13	13	13
Hawaii Tribune-Herald	8	58	0
West Hawaii Today	3	21	0
other community paper	2	0	3
all other places	8	8	7
base: (those who knew about launch site proposal)	[585]	[359]	[226]

note: percentages sum to more than 100 because of multiple responses

TABLE 10

WHERE PEOPLE LEARNED ABOUT IRRADIATION FACILITY
BY GEOGRAPHIC AREA OF RESIDENCE

	total statewide weighted (%)	Big Island (%)	rest of state (%)
Honolulu daily newspapers	59	16	67
television news reports	58	38	62
word of mouth	15	20	13
radio	15	11	16
Hawaii Tribune-Herald	9	55	1
West Hawaii Today	3	18	0
other community paper	3	0	4
all other places	10	13	9
base: (those who knew about irradiation proposal)	[466]	[286]	[180]

note: percentages sum to more than 100 because of multiple responses

**III. Awareness of and Attitudes
Toward the Proposed Space Launch
and Tropical Agriculture Irradiation Facilities**

This section of the report explores in detail how widespread was awareness of the two proposals, prior to our description of them in the questionnaire, and the types of people who already knew about each. On these pages, too, we examine the extent of support and opposition to both the launch site and the irradiation facility and show the demographics of supporters and opponents.

The questionnaire (which is shown in its entirety in the Appendix section of this report) offered a brief synopsis of arguments put forth by those who've taken a stand on each issue. That was done because we anticipated there would be a portion of residents throughout the state who had not heard of the launch site or irradiation proposals, and therefore it would be difficult to elicit an opinion about the acceptability of each from people who lacked exposure to the central viewpoints of both sides.

After a review of official reports, press releases, news clippings and letters to the editor, the most frequently cited arguments in favor and in opposition were prepared and read to respondents -- even those who said they were familiar with the issues -- prior to asking for an opinion about them. These arguments were alternated so that 50 percent of the respondents heard the supporters' side first and the opponents' second, and 50 percent heard them the other way round.

An overview of the findings presented here shows that more residents were informed about the launch facility than about the irradiation plant (a majority, in fact, got their first exposure to the latter issue through taking part in the interview) and, correspondingly, there is more support for building the launch site too. (As reported earlier, a 60 percent majority statewide favors the development of the facility at Ka'u while just 46 percent are for the building of the irradiation plant at Hilo.) Among the opposition, those against the launch site most often say it's because they are fearful it could cause environmental damage to the Big Island; opponents to the irradiation facility talked about their concern with having radioactive material at the site. These and other findings are discussed in more detail in the paragraphs to follow.

The first group of tables here deals with knowledge of and attitudes toward the launch facility. Table 11, below, takes a look at what portion of the public was aware that the proposal existed, even before we introduced the topic through the survey. The figures present statewide information, and then show awareness among residents of West Hawaii, East Hawaii and then the remainder of the counties.

TABLE 11
KNOWLEDGE OF THE LAUNCH SITE PROPOSAL
BY GEOGRAPHIC AREA OF RESIDENCE

	total statewide weighted (%)	West Hawaii (%)	East Hawaii (%)	remainder of state (%)
know some/a lot about facility	30	57	53	27
know just a little about it	32	30	39	32
have not heard of facility	38	13	8	41
base:	[800]	[149]	[251]	[400]

For the state as a whole, 30 percent said they knew either some or a lot about the proposal, 32 percent knew just a little about it and 38 percent had not heard of it prior to the interview. (To have a larger response category for analysis, the 14 percent who said they felt "very well informed" about the issue were combined with the 16 percent who were "somewhat informed" about it.)

Not surprisingly, the figures above show that Big Island residents are far more knowledgeable about it than others. On the Kona side of the island, 57 percent were either very or somewhat informed about the proposal, and in Hilo 53 percent were.

Only about one in ten Big Island residents had not heard of the project at all while four out of ten in the other counties were unaware of it.

On the pages to follow are four tables which are crosstabulations of data. They analyze knowledge of the launch site proposal by numerous demographic characteristics of Big Island residents and residents of Honolulu, Maui and Kauai counties combined. (Tables 12 through 15) The variables evaluated include the age and education of those who answered, their ethnicity, sex, duration of residence in the state, and a number of other characteristics.

These figures show that the proportion of the public that is aware of and informed about the launch site proposal -- no matter what demographic segments they're in -- is always significantly higher on the Big Island than elsewhere in the state, as we might have expected. For example, throughout the state there's clear relationship between years of education and knowledge about the project. The more years of school, the more likely people are to know about it. Nevertheless, a larger proportion of Big Islanders with a high school education or less possess information about the launch site than college graduates on the other islands.

But with that in mind, we see that the degree of information people have about the project rises along with years of education, and that residents 35 years of age and older are more apt to be informed about it than young adults. There's an income relationship too, with awareness generally rising side-by-side with increases in annual household income.

Far more men than women knew about the launch proposal prior to our interview. Looking at the residents of Oahu, Maui and Kauai, only one man out of four had not heard of the project, but more than half the women knew nothing of it. That sex difference was less of a factor on the Big Island, but even there a greater number of men claimed to be well informed about it.

Caucasians who reside on the Big Island are the ethnic segment where the largest proportion call themselves either "well-informed" or "somewhat informed" about the launch site proposal. Correspondingly, when we compare project awareness and knowledge among lifetime residents and those who've moved here, it is people born outside the state who appear best informed about it.

To summarize those four tables, the following shows which segments are relatively well informed about the proposal:

- on the Big Island (population segments where 50 percent or more say they have some or a lot of information about the launch site)
 - more than a high school education
 - 35 or older
 - Caucasians and Orientals
 - lived in Hawaii less than a lifetime
 - men
 - employed in tourism, agriculture or real estate
 - non-union
 - earnings above \$25,000
- in the rest of the state (population segments where one-third or more say they know some or a lot about the proposal)
 - college graduates
 - 35 to 54 years of age
 - union members
 - men
 - earnings above \$45,000

TABLE 12

**KNOWLEDGE OF LAUNCH SITE BY EDUCATION AND AGE
BIG ISLAND VS. REST OF THE STATE**

	total		high school or less		some college or post h.s. training		college graduate or more		18 to 34 years		35 to 54 years		55 years and older	
	Oahu Maui Kauai (%)	Big Island (%)	Oahu Maui Kauai (%)	Big Island (%)	Oahu Maui Kauai (%)	Big Island (%)	Oahu Maui Kauai (%)	Big Island (%)	Oahu Maui Kauai (%)	Big Island (%)	Oahu Maui Kauai (%)	Big Island (%)	Oahu Maui Kauai (%)	Big Island (%)
know some/a lot about facility	27	55	18	42	27	63	37	67	23	38	32	60	28	62
know a little about facility	32	35	32	42	27	31	35	28	29	43	27	33	41	33
have not heard of facility	41	10	50	16	46	6	28	5	48	19	41	7	31	5
base:	[400]	[400]	[163]	[178]	[95]	[114]	[142]	[108]	[139]	[108]	[154]	[163]	[107]	[124]

TABLE 13
KNOWLEDGE OF LAUNCH SITE BY ETHNICITY AND UNION MEMBERSHIP
BIG ISLAND VS. REST OF THE STATE

	total		Caucasian		Oriental		Hawaiian		all others		union member		not a member	
	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
know some/a lot about facility	27	55	30	66	25	52	27	42	28	41	37	48	24	58
know a little about facility	32	35	30	24	43	38	27	42	21	47	28	43	33	31
have not heard of facility	41	10	40	10	32	5	46	16	51	12	35	9	43	11
base:	[400]	[400]	[143]	[145]	[116]	[106]	[76]	[63]	[65]	[86]	[119]	[136]	[281]	[264]

TABLE 14

KNOWLEDGE OF LAUNCH SITE BY LENGTH OF RESIDENCE, SEX AND EMPLOYMENT STATUS
BIG ISLAND VS. REST OF THE STATE

	total		lifetime resident		less than lifetime resident		male		female		employed in tourism, agriculture or real estate		not employed in those industries	
	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
know a lot/some about facility	27	55	26	48	30	68	37	60	18	49	31	58	26	51
know a little about facility	32	35	34	42	28	25	37	31	27	40	34	33	31	37
have not heard of facility	41	10	40	10	42	7	26	9	55	11	35	8	43	12
base:	[400]	[400]	[238]	[256]	[162]	[144]	[204]	[213]	[196]	[187]	[140]	[181]	[260]	[219]

TABLE 15
KNOWLEDGE OF LAUNCH SITE BY INCOME
BIG ISLAND VS. REST OF THE STATE

	total		\$25,000 or less		\$25,001 to \$35,000		\$35,001 to \$45,000		more than \$45,000	
	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
know some/a lot about facility	27	55	17	42	25	63	23	75	42	64
know a little about facility	32	35	21	42	37	31	37	25	32	27
have not heard of facility	41	10	62	16	38	6	40	0	26	9
base:	[400]	[400]	[110]	[182]	[104]	[79]	[64]	[61]	[93]	[57]

note: respondents who declined to name their income are excluded from this table

The next set of four tables consists of similar crosstabulations, but this time showing how demographic characteristics correlate with how people feel about the launch proposal -- the personal qualities of supporters and opponents. Again, the reader will recall that, for the state as a whole, 60 percent said they favor its building, 31 percent oppose it and nine percent were undecided. On the Big Island though, opposition ran a bit higher, even though it remained a minority view. There, 54 percent favor the development of the launch facility, 39 percent oppose it and seven percent are undecided.

When we look at the demographics of those who took either side, we see that the Big Island groups who oppose the launch site are more often college graduates, adults under 35 and ethnicities other than Oriental (Orientals on the Big Island favor it by a two to one margin).

There's an interesting income correlation on the Big Island too, with support for the launch facility increasing side-by-side with rises in earnings. That's true until we reach the top income group -- those with earnings in excess of \$45,000 annually. Although the sub-sample there is not large and therefore the findings are less reliable, it does appear that the segment with the highest income also is more apt than others to be against the launch site development.

In the other counties -- Oahu, Maui and Kauai -- differences in attitude that could be linked with personal characteristics occurred too. Some mirrored the Big Island findings but others did not. In those counties, also, residents of Oriental ancestry were less often opponents of the proposal (just one out of five opposed it) and only 16 percent of the men interviewed were in opposition. The difference in attitude between men and women was vast. As stated, male opposition ran only 16 percent, while a 45 percent plurality of women told us they were against it.

Finally, there is an income correlation too, with support for the project clearly increasing as household income goes up. That is, just 46 percent support comes from those earning \$25,000 or less annually, but in the mid-income ranges (\$25,000 to \$45,000) the proportion that favors it rises to just over 60 percent. Among the top earnings group, the ones in the "more than \$45,000" segment, 70 percent approve of the launch facility (in contrast to the attitude of the top earnings group on the Big Island.

TABLE 16

**FEEL ABOUT LAUNCH SITE BY EDUCATION AND AGE
BIG ISLAND VS. REST OF THE STATE**

	total		high school or less		some college or post h.s. training		college graduate or more		18 to 34 years		35 to 54 years		55 years and older	
	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
favor	61	54	58	53	63	59	62	49	61	45	60	51	62	65
oppose	30	39	31	39	34	33	26	46	31	50	29	41	30	28
don't know/ no opinion	9	7	11	7	4	8	12	5	8	5	11	8	9	7
base:	[400]	[400]	[163]	[178]	[95]	[114]	[142]	[108]	[139]	[108]	[154]	[168]	[107]	[124]

TABLE 17
FEEL ABOUT LAUNCH SITE BY ETHNICITY AND UNION MEMBERSHIP
BIG ISLAND VS. REST OF THE STATE

	total		Caucasian		Oriental		Hawaiian		all others		union member		not a member	
	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
favor	61	54	61	52	68	67	63	51	42	42	68	57	58	52
oppose	30	39	32	43	21	26	27	41	49	50	24	39	32	40
don't know/ no opinion	9	7	7	5	11	7	10	8	9	8	8	4	10	8
base:	[400]	[400]	[143]	[145]	[116]	[106]	[76]	[63]	[65]	[86]	[119]	[136]	[281]	[264]

TABLE 18

**FEEL ABOUT LAUNCH SITE BY LENGTH OF RESIDENCE, SEX AND EMPLOYMENT STATUS
BIG ISLAND VS. REST OF THE STATE**

	total		lifetime resident		less than lifetime resident		male		female		employed in tourism, agriculture or real estate		not employed in those industries	
	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
favor	61	54	57	54	66	53	78	56	43	51	55	53	63	54
oppose	30	39	34	38	24	43	16	40	45	39	36	42	28	38
don't know/ no opinion	9	7	8	8	10	4	6	4	12	10	9	5	9	8
base:	[400]	[400]	[238]	[256]	[162]	[144]	[204]	[213]	[196]	[187]	[140]	[181]	[260]	[219]

TABLE 19

**FEEL ABOUT LAUNCH SITE BY INCOME
BIG ISLAND VS. REST OF THE STATE**

	total		\$25,000 or less		\$25,001 to \$35,000		\$35,001 to \$45,000		more than \$45,000	
	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
favor	61	54	46	48	63	58	60	67	70	49
oppose	30	39	44	43	31	38	24	28	23	42
don't know/ no opinion	9	7	10	8	6	4	16	5	7	9
base:	[400]	[400]	[110]	[182]	[104]	[79]	[64]	[61]	[93]	[57]

note: those who declined to name their income are excluded from this table

All respondents who opposed the development of a launch site were asked to name the reasons underlying their attitude. The question was an open-ended one where the interviewers recorded the answers verbatim and they were later aggregated into response categories. The results are shown below on Table 20:

TABLE 20
REASONS PEOPLE ARE OPPOSED TO THE LAUNCH SITE
BY GEOGRAPHIC AREA OF RESIDENCE

	total statewide weighted (%)	Big Island (%)	rest of state (%)
cause pollution/ harm environment	53	59	52
people in the area will have to move	33	25	35
will change the lifestyle of the Big Island	26	28	26
will not supply enough jobs/ not economically attractive	18	22	18
not an appropriate industry for Hawaii	17	9	18
will endanger surroundings due to accidents/debris	15	19	15
will make the island/state a nuclear target	12	9	12
all other reasons combined	4	6	4
base: (those who opposed the launch site proposal)	[295]	[158]	[137]

note: percentages sum to more than 100 because of multiple responses

Just a glance at the figures reveals that the reasons given by Big Islanders paralleled closely the concerns voiced by residents of the other counties. The only categories where there were more than just a few percentage points between the two groups were:

- A lesser proportion of Big Islanders -- compared with people in other counties -- mentioned residents being forced to move from the Ka'u area as a primary concern (35 percent from outside the Big Island named that possibility; 25 percent of the Hawaii island people mentioned it).
- Oahu, Maui and Kauai residents more often said that a space launch facility is not an appropriate industry for Hawaii and is in conflict with the visitor industry (cited by nine percent of the Big Island residents and by 18 percent of the others).

The major worry that people expressed was about pollution and the possibility for environmental damage to the island. Mentions of air and noise pollution as a by-product of the launches were the concerns most often placed in that first category.

The next group of statistical tables mirror the ones just discussed, but this time examine knowledge of and attitudes toward the proposed irradiation facility for Hilo.

As mentioned earlier on these pages, far fewer residents had even heard of the irradiation treatment plant. A 51 percent majority, in fact, learned about it through taking part in the survey. Only about one resident in five (22 percent) called themselves well informed or somewhat informed about it. Again, though, Big Island people are more knowledgeable than others, as the table on the following page shows.

TABLE 21
KNOWLEDGE OF IRRADIATION FACILITY
BY GEOGRAPHIC AREA OF RESIDENCE

	total statewide weighted (%)	West Hawaii (%)	East Hawaii (%)	remainder of state (%)
know some/a lot about facility	22	40	48	20
know just a little about it	27	23	28	27
have not heard of facility	51	37	24	53
base:	[800]	[149]	[251]	[400]

On the Hilo side of the island where the facility would be located, three out of every four households had at least heard of the proposal, and about half felt reasonably well informed about it. On the Kona side, about two-thirds knew about the project.

Here too, we crosstabulated awareness and knowledge of the irradiation proposal against the personal characteristics of residents, breaking segments out by whether they live on the Big Island or elsewhere in the state. As before, whichever way the data are cut, Big Islanders always are the best informed about it, and the same segments who were knowledgeable about the launch site are the ones with awareness of the irradiation facility too. They are:

- educated beyond high school
- 35 years of age and older
- Caucasians (on the Big Island in particular)
- born outside of the state of Hawaii
- males
- upper income

TABLE 22

**KNOWLEDGE OF IRRADIATION FACILITY BY EDUCATION AND AGE
BIG ISLAND VS. REST OF THE STATE**

	total		high school or less		some college or post h.s. training		college graduate or more		18 to 34 years		35 to 54 years		55 years and older	
	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
know some/a lot about facility	20	45	11	31	24	50	25	67	15	28	21	55	24	46
know a little about facility	27	27	26	28	24	27	30	24	20	24	31	24	31	33
have not heard of facility	53	28	63	41	52	23	45	9	65	48	48	21	45	21
base:	[400]	[400]	[163]	[178]	[95]	[114]	[142]	[108]	[139]	[108]	[154]	[168]	[107]	[124]

TABLE 23
KNOWLEDGE OF IRRADIATION FACILITY BY ETHNICITY AND UNION MEMBERSHIP
BIG ISLAND VS. REST OF THE STATE

	total		Caucasian		Oriental		Hawaiian		all others		union member		not a member	
	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
know some/a lot about facility	20	45	20	55	16	43	21	42	24	35	27	37	17	48
know a little about facility	27	27	24	24	34	33	33	25	15	24	29	26	27	27
have not heard of facility	53	28	56	21	50	24	46	33	61	41	44	37	56	25
base:	[400]	[400]	[143]	[145]	[116]	[106]	[76]	[63]	[65]	[86]	[119]	[136]	[281]	[264]

TABLE 24

**KNOWLEDGE OF IRRADIATION FACILITY BY LENGTH OF RESIDENCE, SEX AND EMPLOYMENT STATUS
BIG ISLAND VS. REST OF THE STATE**

	total		lifetime resident		less than lifetime resident		male		female		employed in tourism, agriculture or real estate		not employed in those industries	
	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
know some/a lot about facility	20	45	18	38	22	57	30	52	9	35	17	44	21	44
know a little about facility	27	27	29	30	25	21	24	21	31	33	27	28	27	28
have not heard of facility	53	28	53	32	53	22	46	26	60	32	56	28	52	28
base:	[400]	[400]	[238]	[256]	[162]	[144]	[204]	[213]	[196]	[187]	[140]	[181]	[260]	[219]

TABLE 25
KNOWLEDGE OF IRRADIATION FACILITY BY INCOME
BIG ISLAND VS. REST OF THE STATE

	total		less than \$25,000		\$25,001 to \$35,000		\$35,001 to \$45,000		more than \$45,000	
	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
know some/a lot about facility	20	45	16	33	14	50	17	50	31	64
know a little about facility	27	27	17	28	32	25	35	33	29	18
have not heard of facility	53	28	67	39	54	25	48	17	40	18
base:	[400]	[400]	[110]	[182]	[104]	[79]	[64]	[61]	[93]	[57]

note: those who declined to name their income are excluded from this table

On Oahu, Maui and Kauai, support for the commodities irradiation facility increases along with years of education, with college graduates tending to favor it in greater number. There's a hint of that on the Big Island too, though the percentage rise is somewhat less notable. Statewide, opposition comes from the mid-aged segment most often, but on Hawaii island is it the youngest adults -- the ones between 18 and 34 -- who are most against the proposal (63 percent).

To summarize, on the Big Island opposition to the fruit irradiation facility comes mainly from:

- 18 to 34 year olds
- non-Orientals
- women
- those with household incomes not exceeding \$35,000 a year

For the rest of the state, opposition is more pronounced among:

- those who were not educated beyond high school
- Orientals and Filipinos
- people born in Hawaii
- women
- those employed in tourism, agriculture or real estate
- annual income of \$35,000 or less

TABLE 26

**FEEL ABOUT IRRADIATION FACILITY BY EDUCATION AND AGE
BIG ISLAND VS. REST OF THE STATE**

	total		high school or less		some college or post h.s. training		college graduate or more		18 to 34 years		35 to 54 years		55 years and older	
	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
favor	46	41	39	40	45	40	53	46	50	33	39	39	50	51
oppose	46	50	53	50	48	51	38	47	44	63	52	52	40	35
don't know/ no opinion	8	9	8	10	7	9	9	7	6	4	9	9	10	14
base:	[400]	[400]	[163]	[178]	[95]	[114]	[142]	[108]	[139]	[108]	[154]	[168]	[107]	[124]

TABLE 27

**FEEL ABOUT IRRADIATION FACILITY BY ETHNICITY AND UNION MEMBERSHIP
BIG ISLAND VS. REST OF THE STATE**

	total		Caucasian		Oriental		Hawaiian		all others		union member		not a member	
	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big island	Oahu Maui Kauai	Big Island
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
favor	46	41	52	41	38	51	59	35	32	35	46	39	46	43
oppose	46	50	44	53	51	35	36	59	53	56	46	54	46	47
don't know/ no opinion	8	9	4	6	11	14	5	6	15	9	8	7	8	10
base:	[400]	[400]	[143]	[145]	[116]	[106]	[76]	[63]	[65]	[86]	[119]	[136]	[281]	[264]

TABLE 28

FEEL ABOUT IRRADIATION FACILITY BY LENGTH OF RESIDENCE, SEX AND EMPLOYMENT STATUS
BIG ISLAND VS. REST OF THE STATE

	total		lifetime resident		less than lifetime resident		male		female		employed in tourism, agriculture or real estate		not employed in those industries	
	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
favor	46	41	39	41	55	42	61	51	32	31	38	39	49	44
oppose	46	50	52	48	37	52	34	41	57	59	57	52	42	47
don't know/ no opinion	8	9	9	11	8	6	5	8	11	10	5	9	9	9
base:	[400]	[400]	[238]	[256]	[162]	[144]	[204]	[213]	[196]	[187]	[140]	[181]	[260]	[219]

TABLE 29
FEEL ABOUT OF IRRADIATION FACILITY BY INCOME
BIG ISLAND VS. REST OF THE STATE

	total		\$25,000 or less		\$25,001 to \$35,000		\$35,001 to \$45,000		more than \$45,000	
	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
favor	46	41	46	39	42	34	48	54	53	46
oppose	46	50	50	52	51	58	40	34	39	47
don't know/ no opinion	8	9	4	9	7	8	12	12	8	7
base:	[400]	[400]	[110]	[182]	[104]	[79]	[64]	[61]	[93]	[57]

note: those who declined to name their income are excluded from this table

Table 30, below, documents that opponents' fears are centered on the perceived dangers of dealing with radioactive products. Included in this category were all mentions of radioactive waste disposal, storage of the material, possible introduction of radioactive products into the water supply, and so on. Statewide, two out of three opponents talked about those concerns and, surprisingly, it was brought up by a higher proportion of Oahu, Maui and Kauai residents than by Big Islanders.

TABLE 30
REASONS WHY PEOPLE ARE OPPOSED TO THE IRRADIATION FACILITY
BY GEOGRAPHIC AREA OF RESIDENCE

	total statewide weighted (%)	Big Island (%)	rest of state (%)
dangers of dealing with radioactive products	65	56	66
don't believe the fruit is safe to eat	34	31	35
natural disasters in the area would make the plant unsafe	27	33	26
don't trust the information given/ not enough is known about radiation	16	18	16
not economically attractive/ people on Mainland won't buy fruit	11	13	11
there are better treatment alternatives available	9	18	8
will risk the health of those who work there	6	3	6
all other reasons combined	2	3	2
don't know	1	0	1
base: (those who oppose irradiation proposal)	[393]	[198]	[195]

note: percentages sum to more than 100 because of multiple responses

In a distant second place, about one-third of the opponents voiced their fear that the fruit would not be safe to eat. Many of them said "I wouldn't eat it myself or feed it to my family" and some of them added that they doubted its ability to be marketed successfully on the Mainland, once people realize that it has been treated with radioactive material.

As shown on the previous page, other worries voiced by more than 10 percent included that natural disasters on the Hilo side could release radioactivity into the environment (27 percent), that people shouldn't necessarily trust government's verification of its safety since dangers have come to light about other products formerly thought safe (16 percent), and that it's not economically attractive, mainly because consumers are unlikely to want it (11 percent).

Tables 31 and 32, to follow, are summary calculations which crosstabulate attitudes toward the launch site by attitudes toward the irradiation facility for both the Big Island and the rest of the state (Table 31), and how support and opposition to each proposal is related to having knowledge of them prior to the interview.

The figures on Table 31 show that the vast majority of people who favor the building of the irradiation facility also approve of the proposed launch site. On the Big Island, 73 percent of those who approve of the Hilo facility also want the Ka'u site developed for launches, and statewide, 80 percent of the irradiation supporters voted for the launch site too.

Opponents to the irradiation facility take a more tempered view of the other proposal though, as the figures below document. Roughly four out of ten who oppose irradiation are in favor of the launch facility.

TABLE 31

**FEEL ABOUT LAUNCH FACILITY
BY ATTITUDE TOWARD IRRADIATION PLANT
(BIG ISLAND VS. REST OF STATE)**

	total statewide weighted (%)	BIG ISLAND			REST OF STATE		
		favor irradiation (%)	oppose irradiation (%)	no opinion (%)	favor irradiation (%)	oppose irradiation (%)	no opinion (%)
favor launch facility	60	73	38	57	80	44	51
oppose it	31	24	56	29	16	45	26
don't know/ no opinion	9	3	7	14	4	11	22
base:	[800]	[166]	[198]	[36]	[174]	[195]	[31]

(Separate calculations made from our printouts reveal that on the Big Island, 30 percent favor both proposals, 28 percent oppose both, and the remaining 42 percent either want one and don't want the other, oppose one and are undecided about the other, or expressed some other combination of responses. In the other counties, 37 percent favor both, 21 percent oppose both, and, just as on the Big Island, 42 percent gave one or the other of the mixed responses.)

On Table 32 we see that the people who had at least some knowledge of the two projects favored it in far greater proportion than those who learned about them from the descriptions supplied by the survey instrument.

TABLE 32

**FEEL ABOUT LAUNCH AND IRRADIATION FACILITIES
BY WHETHER THE RESPONDENT HAD HEARD ABOUT THE PROPOSALS
PRIOR TO THE INTERVIEW**

	LAUNCH FACILITY				IRRADIATION FACILITY		
	total statewide weighted (%)	heard of it (%)	had not (%)		total statewide weighted (%)	heard of it (%)	had not (%)
favor it	60	69	45	favor it	46	56	36
oppose it	31	23	43	oppose it	46	38	54
don't know/ no opinion	9	8	12	don't know/ no opinion	8	6	10
base:	[800]	[585]	[215]	base:	[800]	[466]	[334]

A couple of possibilities come to mind in explanation. One is that in a first time hearing of the most frequently voiced arguments of both sides, the more emotional health and safety issues that opponents discuss hold greater sway than the economic arguments of supporters.

There also may be a relationship between the personal qualities of people who had not heard about the proposals and their subsequent more negative reaction to them. As we saw earlier, those without prior knowledge of the projects had fewer years of education, were younger and had lower earnings than the others. These demographic characteristics may well have a bearing on attitudes toward the two proposals, and particularly toward the irradiation facility where a solid majority of the previously uninformed voted against it.

The final two tables in this section show the results of our questions concerning C. Brewer and Company. They were included in the survey because of the firm's involvement on the Big Island and their offer to donate land at Ka'u for a space launch facility. It was thought that people's attitudes about the facility's acceptability might be related to how they felt about Brewer.

As it turned out, though, there was little to pursue there because a plurality of residents statewide told us they were too unfamiliar with the firm to respond to our questions, and those who answered gave a positive response more often than not.

TABLE 33
WHETHER C. BREWER HAS BEEN
CONCERNED ABOUT THE COMMUNITY

	total statewide weighted (%)	Oahu Maui Kauai (%)	Big Island (%)
concerned for the community	32	31	41
out for itself	24	23	32
don't know	44	46	27
base:	[800]	[400]	[400]

TABLE 34
RESPONDENTS' RATINGS OF C. BREWER AND CO.

	total statewide weighted (%)	Oahu Maui Kauai (%)	Big Island (%)
one of the best companies in Hawaii	16	15	21
about equal to others	39	39	43
less well-managed than others	4	4	7
don't know	41	43	29
base:	[800]	[400]	[400]

Even though one out of every four residents statewide -- and more on the Big Island -- called Brewer "out for itself," many who answered that way added a qualifier, saying that "They're no different from any other large company in that regard," or "It's a corporation's duty to watch out for itself first." Therefore, we did not crosstabulate residents' attitudes toward C. Brewer against any of the launch site inquiries since feelings about the company appeared to have virtually no bearing on attitudes toward Big Island development.

**IV. Likelihood Of Altering the Opinions
of Project Opponents**

The tables and discussion in this report section deal only with opponents of the launch site, the irradiation plant, or both. These segments are examined here to see how fixed their opinions are, and whether they could be reached through various media and by a number of different arguments.

Each time a respondent told us of his opposition to either proposal we followed with a series of questions to test whether the conviction expressed was unshakeable, or if new information might change the person's mind. One of the inquiries was a very direct one which said:

"How likely do you think it is that your opinion about the (launch site/irradiation plant) may change in the future, based on new information you may acquire? Would you say very likely, somewhat likely, not too likely, or not at all likely?"

Table 35, below, shows the statewide total response related to both the launch facility and the irradiation plant. It is crosstabulated by the feelings expressed about the desirability of economic growth in Hawaii, to see if there's a relationship between the two.

TABLE 35
WHETHER OPPOSITION TO LAUNCH AND RADIATION FACILITIES
IS LIKELY TO CHANGE
BY ATTITUDES TOWARD ECONOMIC GROWTH FOR THE STATE

	LAUNCH FACILITY				IRRADIATION FACILITY			
	total statewide weighted (%)	favor economic growth (%)	want things to stay the same (%)	don't know/ depends (%)	total statewide weighted (%)	favor economic growth (%)	want things to stay the same (%)	don't know/ depends (%)
opinion could be changed	44	40	42	70	52	61	43	63
not likely to change	52	52	54	22	43	31	54	37
depends on information	4	8	3	8	5	8	3	0
base:	[249 opponents]				[369 opponents]			

(The category labeled "opinion could be changed" includes both the opponents who answered "very likely to change" and "somewhat likely to change," and the two "unlikely" categories have been combined too. The full range of response to both questions is shown on the questionnaire copy in the appendix to this report.)

As shown on the previous page, there was a marginally higher proportion open to a change in attitude about the irradiation plant than about the launch site (52 percent versus 44 percent).

When we look at those attitudes against perceptions about the desirability of economic growth we find that on the launch facility side, the two matters seem to be independent. That is, while 42 percent of the people who "want to keep things the way they are" say they may change their opposition to the Ka'u facility if given more information about it, about an equal proportion (40 percent) of those who favor growth may change their opposition in the future too. The only segment where a majority may change is among the ones who couldn't make up their minds about whether growth is good or not, and that was just a small handful of people.

A relationship does seem to exist, however, between favoring growth and being affected by new information about the irradiation plant. A solid majority (61 percent) of the growth-oriented told us their negative opinion about irradiation may change. But among the stay-as-we-are segment, only about four out of ten opponents said they'd be open to new information about the plant.

Tables 36 through 39 on the pages to follow show information sources for the people who could be affected by learning more about the launch site and the irradiation plant. As the figures show, those most open to new information are followers of news reported in their community papers. For the Big Islanders who admitted their minds could be changed, the Hawaii Tribune-Herald appears to be a trusted source of information.

TABLE 36

WHETHER OPPOSITION TO LAUNCH SITE COULD CHANGE,
 BASED ON NEW KNOWLEDGE,
 BY PRIMARY SOURCE OF INFORMATION (BIG ISLAND)

	Big Island total (%)	television (%)	Hawaii Tribune- Herald (%)	West Hawaii Today (%)	radio (%)	Honolulu dailies (%)	all other sources (%)
opinion could be changed	42	40	57	29	36	36	50
not likely to change	55	53	41	71	64	64	50
depends on information	3	7	2	0	0	0	0
base:	[158 opponents]						

TABLE 37

WHETHER OPPOSITION TO LAUNCH SITE COULD CHANGE,
 BASED ON NEW KNOWLEDGE
 BY PRIMARY SOURCE OF INFORMATION (REST OF STATE)

	Oahu Maui Kauai total (%)	television (%)	Honolulu dailies (%)	community newspaper (%)	radio (%)	all other sources (%)
opinion could be changed	45	42	46	57	29	60
not likely to change	51	51	50	43	71	40
depends on information	4	7	4	0	0	0
base:	[137 opponents]					

TABLE 38

WHETHER OPPOSITION TO IRRADIATION FACILITY COULD CHANGE,
 BASED ON NEW KNOWLEDGE,
 BY PRIMARY SOURCE OF INFORMATION (BIG ISLAND)

	Big Island total (%)	television (%)	Hawaii Tribune- Herald (%)	West Hawaii Today (%)	radio (%)	Honolulu dailies (%)	all other sources (%)
opinion could be changed	42	42	53	43	8	36	40
not likely to change	56	55	47	57	83	50	60
depends on information	2	3	0	0	9	14	0
base:	[198 opponents]						

TABLE 39

WHETHER OPPOSITION TO IRRADIATION FACILITY COULD CHANGE,
 BASED ON NEW KNOWLEDGE
 BY PRIMARY SOURCE OF INFORMATION (REST OF STATE)

	Oahu Maui Kauai total (%)	television (%)	Honolulu dailies (%)	community newspaper (%)	radio (%)	all other sources (%)
opinion could be changed	54	52	57	56	61	25
not likely to change	41	43	37	4	35	50
depends on information	5	4	6	0	4	25
base:	[195 opponents]					

When interviewing opponents of the launch site, we tested four different messages about it, first reading them a statement that responded to concerns some people have, then following with an inquiry asking whether that knowledge would make the facility more acceptable.

Table 40, to follow, shows that Big Island opponents were the least responsive to the information given; at most, only about one-third would be affected favorably by any one message. (Many people, in fact, answered "I wouldn't believe they were telling the truth," to each of the statements we read.)

Opponents on Oahu, Maui and Kauai were somewhat more responsive, but it was still a minority that said any one of the four items of information would change their minds.

For both groups, the least effective communication about the launch facility would be an assurance that it would not be larger than a Neighbor Island airport, and that the rockets would be small. The most effective would be a response to concerns about whether harm could come to the environment through the launches initiated there.

TABLE 40

**THE EFFECT OF VARIOUS MESSAGES ON ACCEPTABILITY OF LAUNCH SITE
BIG ISLAND VS. REST OF STATE**

if it were learned that...	the facility would be no larger than an airport		few residents would have to move		activities at the facility are unlikely to harm the environment		launch facilities have become nature and wildlife preserves	
	Oahu Maui Kauai (%)	Big Island (%)	Oahu Maui Kauai (%)	Big Island (%)	Oahu Maui Kauai (%)	Big Island (%)	Oahu Maui Kauai (%)	Big Island (%)
could make it more acceptable	28	23	32	23	43	34	41	31
wouldn't affect opinion	72	77	68	77	57	66	59	69
base: (opponents)	[137]	[1585]	[137]	[158]	[137]	[158]	[137]	[158]

We tested three items of information among opponents to the irradiation facility and found that here too, only a minority was affected by the messages. More than three out of every four opponents stuck by their opposition no matter which statement was read, and the percentages were very similar between Big Island residents and those living elsewhere in the state.

Fewer than 20 percent said their opinion would be affected by learning that irradiation is ongoing at 40 U.S. plants and 150 plants worldwide. Roughly 25 percent said their minds could be changed by the other two facts: that familiar products are already treated by the method or that Mainland consumers preferred irradiated fruit to other options during a recent test marketing on the Mainland.

TABLE 41
THE EFFECT OF VARIOUS MESSAGES ON ACCEPTABILITY OF IRRADIATION FACILITY
BIG ISLAND VS. REST OF STATE

if it were learned that...	there are 40 U.S. plants and 150 plants worldwide		familiar products like Band-Aids and Pampers are already treated by this method		consumers on the Mainland chose to buy irradiated fruit over other options	
	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island
	(%)	(%)	(%)	(%)	(%)	(%)
could make it more acceptable	19	15	27	24	26	27
wouldn't affect opinion	81	85	73	76	74	73
base: (opponents)	[195]	[198]	[195]	[198]	[195]	[198]

Tables 42 through 45 break out the personal characteristics of those whose opinions could be changed and those whose opposition to the launch facility appears fixed. To summarize the results shown there, the Big Island residents most open to change are:

- the ones educated beyond high school
- in their middle years (35 to 54)
- Orientals
- union members
- middle income and above

And for the rest of the state, the characteristics of groups where a higher proportion may change is similar:

- college graduates
- in their middle years
- Caucasians and Orientals
- union members
- middle income

TABLE 42

**WHETHER OPPOSITION TO LAUNCH SITE COULD CHANGE BY EDUCATION AND AGE
BIG ISLAND VS. REST OF THE STATE**

	total		high school or less		some college or post h.s. training		college graduate or more		18 to 34 years		35 to 54 years		55 years and older	
	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
opinion could be changed	45	42	41	37	42	42	51	49	48	37	41	49	45	34
not likely to change	51	55	51	59	53	53	49	51	48	57	59	49	45	63
depends on information	4	3	8	4	5	5	0	0	4	6	0	2	10	3
base: (opponents) [137] [158]														

TABLE 43

**WHETHER OPPOSITION TO LAUNCH SITE COULD CHANGE BY ETHNICITY AND UNION MEMBERSHIP
BIG ISLAND VS. REST OF THE STATE**

	total		Caucasian		Oriental		Hawaiian		all others		union member		not a member	
	Oahu	Big	Oahu	Big	Oahu	Big	Oahu	Big	Oahu	Big	Oahu	Big	Oahu	Big
	Kauai	Island	Kauai	Island	Kauai	Island	Kauai	Island	Kauai	Island	Kauai	Island	Kauai	Island
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
opinion could be changed	45	42	55	43	50	55	15	42	47	30	54	49	42	38
not likely to change	51	55	40	52	50	41	78	58	47	68	45	47	53	59
depends on information	4	3	5	5	0	4	8	0	6	2	1	4	5	3
base: (opponents) [137] [158]														

TABLE 44

**WHETHER OPPOSITION TO LAUNCH SITE COULD CHANGE
BY LENGTH OF RESIDENCE, SEX AND EMPLOYMENT STATUS
BIG ISLAND VS. REST OF THE STATE**

	total		lifetime resident		less than lifetime resident		male		female		employed in tourism, agriculture or real estate		not employed in those industries	
	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
opinion could be changed	45	42	43	41	47	44	48	41	43	43	50	40	42	44
not likely to change	51	55	50	56	53	53	47	57	53	53	45	59	54	51
depends on information	4	3	7	3	0	3	5	2	4	4	5	1	4	5
base: (opponents)	[137]	[158]												

TABLE 45

WHETHER OPPOSITION TO LAUNCH SITE COULD CHANGE BY INCOME
BIG ISLAND VS. REST OF THE STATE

	total		\$25,000 or less		\$25,001 to \$35,000		\$35,001 to \$45,000		more than \$45,000	
	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
opinion could be changed	45	42	45	39	41	40	59	59	40	54
not likely to change	51	55	47	58	54	60	40	35	60	38
depends on information	4	3	8	3	6	0	1	6	0	8
base: (opponents) [137] [158]										

The same calculations were performed to evaluate the types of people whose minds are not finally made up about the irradiation facility. Their characteristics are shown in detail on the four tables to follow, and in a number of ways are different from those who could be affected by new information about the launch site. For example, they are more often people who've not been to college, younger adults, under 35 years of age, residents of the state for a lifetime, and those with incomes below the highest range. But here, too, it is people of Oriental ancestry who more often appear open to reconsideration of their stance.

TABLE 46

WHETHER OPPOSITION TO IRRADIATION FACILITY COULD CHANGE BY EDUCATION AND AGE
BIG ISLAND VS. REST OF THE STATE

	total		high school or less		some college or post h.s. training		college graduate or more		18 to 34 years		35 to 54 years		55 years and older	
	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
opinion could be changed	54	42	55	46	52	40	53	38	57	48	48	37	58	42
not likely to change	41	56	39	51	45	60	41	60	42	49	45	63	33	51
depends on information	5	2	6	3	3	0	6	2	1	3	7	0	9	7
base: (opponents) [195] [198]														

TABLE 47

**WHETHER OPPOSITION TO IRRADIATION FACILITY COULD CHANGE BY ETHNICITY AND UNION MEMBERSHIP
BIG ISLAND VS. REST OF THE STATE**

	total		Caucasian		Oriental		Hawaiian		all others		union member		not a member	
	Oahu	Big	Oahu	Big	Oahu	Big	Oahu	Big	Oahu	Big	Oahu	Big	Oahu	Big
	Kauai	Island	Kauai	Island	Kauai	Island	Kauai	Island	Kauai	Island	Kauai	Island	Kauai	Island
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
opinion could be changed	54	42	46	36	62	54	43	43	63	42	48	52	56	36
not likely to change	41	56	51	63	32	43	51	52	32	56	41	47	41	61
depends on information	5	2	3	1	6	3	6	5	5	2	11	1	3	3
base: (opponents) [195] [198]														

TABLE 48

WHETHER OPPOSITION TO IRRADIATION FACILITY COULD CHANGE
BY LENGTH OF RESIDENCE, SEX AND EMPLOYMENT STATUS
BIG ISLAND VS. REST OF THE STATE

	total		lifetime resident		less than lifetime resident		male		female		employed in tourism, agriculture or real estate		not employed in those industries	
	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
opinion could be changed	54	42	57	46	48	35	53	39	54	45	52	46	54	38
not likely to change	41	56	38	51	46	64	41	58	41	53	41	49	41	62
depends on information	5	2	5	3	6	1	6	3	5	2	7	5	5	0
base: (opponents) [195] [198]														

TABLE 49

WHETHER OPPOSITION TO IRRADIATION FACILITY COULD CHANGE BY INCOME
BIG ISLAND VS. REST OF THE STATE

	total		\$25,000 or less		\$25,001 to \$35,000		\$35,001 to \$45,000		more than \$45,000	
	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island	Oahu Maui Kauai	Big Island
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
opinion could be changed	54	42	47	40	54	54	68	52	58	26
not likely to change	41	56	49	57	39	46	32	48	38	70
depends on information	5	2	4	3	7	0	0	0	4	4
base: (opponents)[195] [198]										

DEMOGRAPHIC CHARACTERISTICS OF SURVEY RESPONDENTS

There are two important reasons for gathering information about the personal and household characteristics of those who participate in a survey.

First, these data provide the basis for crosstabulations, enabling us to evaluate whether such matters as age, ethnic background or annual income have any relationship to the attitudes people express or the behaviors they report. The other reason for collecting demographics is that they provide a tool to evaluate the representativeness of the survey sample -- how successful we were in reaching a reasonably accurate cross-section of the community.

The tables to follow provide a comparison of known population characteristics of Hawaii residents and the attributes of those who participated in this survey. The population figures are, for the most part, based upon 1980 U.S. Bureau of the Census data tapes.

	<u>statewide</u> <u>survey</u> <u>respondents</u> (%)	<u>actual</u> <u>state</u> <u>population</u> (%)	<u>Big Island</u> <u>survey</u> <u>respondents</u> (%)	<u>actual</u> <u>Big Island</u> <u>population</u> (%)
<u>ethnicity</u>				
Caucasian	34	33	36	34
Chinese	5	6	1	2
Filipino	9	14	7	14
Hawaiian/ part-Hawaiian	16	12	22	19
Japanese	24	25	26	27
other/mixed	11	10	9	5

	<u>statewide</u> <u>survey</u> <u>respondents</u> (%)	<u>actual</u> <u>state</u> <u>population</u> (%)	<u>Big Island</u> <u>survey</u> <u>respondents</u> (%)	<u>actual</u> <u>Big Island</u> <u>population</u> (%)
<u>age</u> (adult population)				
18 to 24 years	11	21	7	16
25 to 34 years	24	26	21	25
35 to 44 years	27	16	28	16
45 to 54 years	11	14	14	14
55 and older	28	23	31	29
median age:	40 years	37 years	45 years	40 years

annual
household income

less than \$15,000	8	36	22	44
\$15,000 to \$25,000	19	25	26	26
\$25,001 to \$35,000	25	18	21	15
\$35,001 to \$45,000	15	--	16	--
\$35,001 to \$50,000	--	13	--	9
more than \$45,000	26	--	15	--
more than \$50,000	--	8	--	5
median household income:	\$32,775	\$20,475	\$25,950	\$16,975

(Census categories are slightly different in that they start with a rounded figure, i.e. \$25,000 to \$34,999.)

	<u>statewide survey respondents</u> (%)	<u>actual state population</u> (%)	<u>Big Island survey respondents</u> (%)	<u>actual Big Island population</u> (%)
<u>sex</u> (adult population)				
male	51	51	53	51
female	49	49	47	49

duration of
residency (1)

lifetime resident	58		64	
less than five years	14		7	
five to ten years	7		9	
more than ten years but less than lifetime	21		21	

(1) official figures are unavailable

years of school
completed (2)

some high school or less	8	26	9	31
high school graduate	27	35	36	36
some college or post high school training	27	18	28	18
college graduate or more	37	20	27	15

(2) statewide figures include just residents who are 25 years of age and older

	statewide survey <u>respondents</u> (%)	actual state <u>population</u> (%)	Big Island survey <u>respondents</u> (%)	actual Big Island <u>population</u> (%)
--	--	---	---	--

union membership (3)

union household	27		34	
non-union	73		66	

(3) official figures are unavailable (A 1985 report from the Hawaii State Department of Labor & Industrial Relations estimates a total of 157,000 members of unions and associations, but an accompanying footnote points out that the data exclude 12 that did not report membership. In past research, we have usually found that about one in three households claims union membership.)

employment (4)

tourism	17		21	
agriculture	9		27	
land or real estate development	7		9	

(4) official figures are unavailable

As shown, the characteristics of the survey sample, for the most part, closely matched the actual population data. The discrepancies are mainly a result of the methodology employed for this study.

Persons of Filipino ancestry, for example, are usually underrepresented in research that involves one interview per household because that ethnic group's household size tends to be somewhat larger and the proportion of children to adults is greater. We've seen an increase, too, in recent years among people who identify themselves as part-Hawaiian, rather than part-something else.

The youngest age group of adults (18 to 24 years) is generally underrepresented in a study that screens for the head of the household because some in that age group are still living with their parents.

The median income of survey respondents is also higher, which is to be expected. The census, of course, is now seven years old, so we would anticipate a rise in earnings at the present. Median household income statewide in 1984 was estimated at \$26,350. Thus our \$32,775 figure, based upon the study's total sample, seems a reasonable upward increase over the now dated 1980 census figures and correlates with the findings of other research projects we've undertaken recently. Similarly, the jump in Big Island income -- from \$16,975 in 1980 to \$25,950 -- also seems within reason.

APPENDIX

Interviewer: _____

I.D. #: _____

Date: _____

Telephone: _____

County: West Hawaii..... 1
East Hawaii..... 2
Honolulu..... 3
Maui..... 4
Kauai..... 5

FREQUENCIES

(bases equal 800 unless otherwise noted)

Big Island Issues Survey

Barbara Sunderland & Associates

August, 1987

Hello, my name is _____ and I'm with Sunderland & Associates, an independent research firm in Hawaii. We've been commissioned to do a study to learn residents' feelings about development projects proposed for our state.

- a. First, are you the head of the household or one of the heads? (IF NOT, ASK TO SPEAK WITH A HEAD OF HOUSEHOLD. IF HEAD OR SPOUSE NOT AVAILABLE, YOU MAY INTERVIEW ANY FAMILY MEMBER WHO IS 18 YEARS OF AGE OR OLDER. RECORD RESULT BELOW).

household head..... 89%

another adult..... 11%

(REPEAT INTRODUCTION IF NECESSARY)

Although the projects we'll be talking about may not be located in your county, we want everyone's opinion throughout the state. To begin, I have just a couple of general questions...

1. What is your one most important source of news and information about what is going on locally? Is it...(READ CHOICES. WHEN INTERVIEWING ON THE BIG ISLAND, SAY: "A community newspaper such as West Hawaii Today or the Hawaii Tribune-Herald." IF THAT IS RESPONDENT'S CHOICE, CIRCLE WHICH OF THE TWO IS READ.)

television..... 43%

radio..... 8%

a community newspaper..... 5%

(West Hawaii Today)..... 1%

(Hawaii Tribune-Herald)..... 3%

the daily Honolulu papers..... 37%

talking with friends and
neighbors..... 2%

or something else (SPECIFY)

_____ 1%

BIG ISLAND ONLY

2. Just in general, would you say you are more in favor of economic growth for our islands or more in favor of keeping things the way they are now?

economic growth..... 53%

keeping things the same..... 40%

don't know/depends..... 7%

3. Suppose we have to decide whether to have a project in a particular area of one island, and that project is one that is likely to benefit everyone in the state. Who should decide whether or not the project should be built -- the people who live in that area, or all the people throughout the state?

people in area..... 44%

people in the state..... 53%

don't know/can't say..... 3%

Now, I have some questions about the Big Island of Hawaii...

4. As you may have heard, the Big Island has the potential to eventually produce about one-third of the electricity for the entire state, if the geothermal resource is developed fully there. How do you feel about the development of geothermal energy on the Big Island? Are you generally in favor of it or generally opposed to it?

in favor..... 84%

opposed..... 7%

don't know..... 9%

5. The west coast of the Big Island is slated for extensive hotel and resort development in the Kona-Kohala district. In general do you favor or oppose resort development there?

favor..... 66%

oppose..... 24%

don't know..... 10%

6. Some government officials and business people have proposed that a space facility be built in Ka'u on the Big Island. Rockets launched there would carry small, unmanned payloads such as satellites into orbit.

Had you heard of this proposed launch facility for the Big Island prior to my description of it just now?

yes..... 62%

no..... 37%

don't know/not certain..... 1%

SKIP TO QUESTION 9

7. How familiar are you with this proposal? (READ CATEGORIES)

a lot..... 22%

some..... 26%

only a little..... 52%

base: [499]

8. Where did you get most of your information about it? (PROBE) Where else did you hear or read about it?

T.V. News - 55%

Honolulu papers - 63%

Hawaii Tribune Herald - 8%

West Hawaii Today - 3%

other community paper - 2%

word-of-mouth - 18%

radio - 13%

other - 8%

don't know - 1%

base: [499]

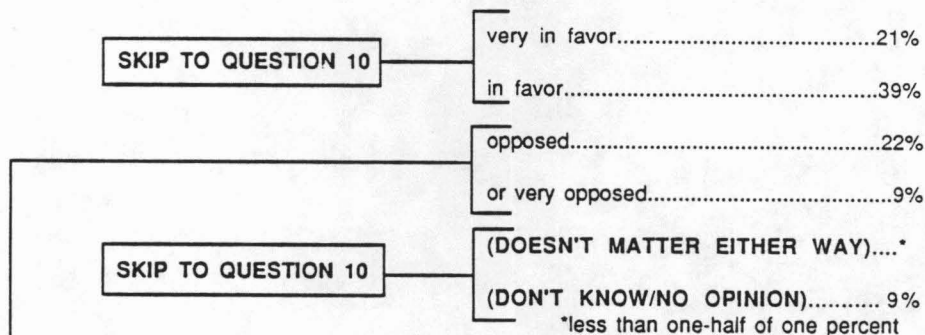
percentages sum to more than 100 because of multiple responses

9. Here is some information about the proposed launch facility, the viewpoints of both supporters and opponents:

Supporters say it could create three to six hundred jobs and bring millions of dollars a year to the state's economy. It could generate scientific and technical jobs for Hawaii's people and make the state a world leader in space technology.

Opponents say that the rockets taking off could create pollution and safety hazards, and that some local people who live in the area may have to move. They also worry about how a launch facility will affect the lifestyle of residents there.

From what you know or what I have told you, how do you feel about the building of a launch facility on the Big Island? Would you say you are...?



- 9a. What are the main reasons why you are opposed to it? (PROBE)
Are there any other reasons?

cause pollution - 54%	accidents/debris - 15%
people have to move - 33%	nuclear target - 12%
not enough jobs - 18%	not an appropriate industry - 17%
change lifestyle - 26%	other - 4%

base: [248]

percentages sum to more than 100 because of multiple responses

	far more acceptable	somewhat	no effect	don't know
9b. If you learned that the launch facility would be no larger than a typical neighbor island airport, and that the rockets launched there would be small, would that make the project <u>far more</u> acceptable to you, <u>somewhat</u> more acceptable to you, or would it have <u>no effect</u> on the way you feel?	7%	20%	70%	3%
If you learned that few, if any, residents would have to move to make way for this facility, would that make the project ... (READ CATEGORIES)	8%	23%	67%	2%
If you learned that activities at the launch facility were unlikely to harm the environment, would that make it... (READ CATEGORIES)	13%	30%	57%	1%
If you learned that launch facilities around the world have become nature and wildlife preserves, would that make the proposal... (READ CATEGORIES)	14%	26%	56%	4%

base: [248]

9c. How likely do you think it is that your opinion about the launch facility could change in the future, based on new information you may acquire? Would you say very likely, somewhat likely, not too likely, or not at all likely?

very likely.....12%
 somewhat likely.....32%
 not too likely..... 25%
 not at all likely.....27%
 don't know/depends on
 information.....4%
 base: [248]

10. As you may have heard, C. Brewer has offered to donate 500 acres of land for the launch facility. Because C. Brewer has made this offer, I'd like to ask you a couple of questions about that firm.

Based on what you've seen or heard about C. Brewer, would you rate it as one of the best-managed large companies in Hawaii, about equal to others of that size, or less well-managed than other large firms you know about?

one of the best..... 16%
 about equal to others.....39%
 less well-managed
 than others.....4%
 don't know..... 41%

11. Would you say that C. Brewer has usually been concerned about the community, or usually just looking out for itself?

concerned about the
 community..... 32%
 out for itself.....24%
 don't know..... 44%

12. The second project I'd like to ask you about is the fruit and vegetable irradiation plant proposed to be built near Hilo, on the Big Island.

Had you heard of this proposed irradiation facility for the Big Island before now?

yes.....50%
 no.....50%
 don't know/not certain.....*
 *less than one-half of one percent

SKIP TO QUESTION 15

13. How familiar are you with this proposal? (READ CATEGORIES)

a lot.....17%
 some.....28%
 only a little.....55%
 base: [396]

14. Where did you get most of your information about it? (PROBE)

Where else did you hear or read about it?

percentages sum to more than 100 because to multiple responses

T.V. news - 58%	word-of-mouth - 14%
Honolulu papers - 59%	radio - 15%
Hawaii Tribune Herald - 9%	other - 10%
West Hawaii Today - 4%	
other community papers - 3%	base: [396]

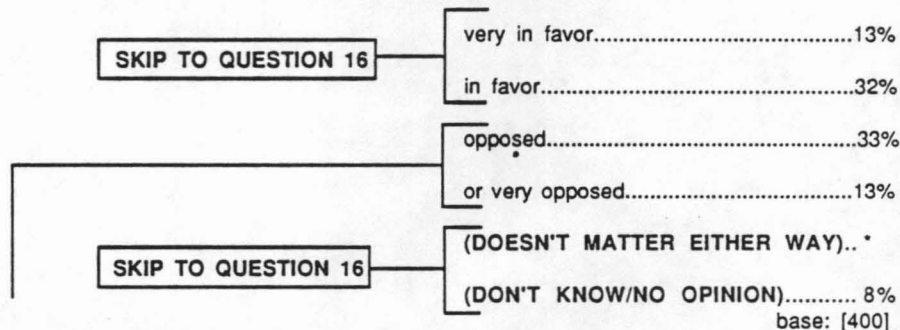
15. Here is some information about the irradiation plant, again from both sides of the issue:

The irradiation plant proposed to be built near Hilo would get rid of fruit flies on papayas and other local produce so they can be sold in Mainland and foreign markets. The process uses a radioactive source to treat the fruit.

Supporters say that the irradiation process would help the local farm industry grow significantly since it makes the fruit look better, makes picking easier, and reduces the number that have to be thrown away. This process kills fruit flies more effectively than current methods and the Food and Drug Administration has determined that irradiated fruit is safe to eat.

Opponents to the building of the Hilo plant worry about the safety of the facility. They say that Hilo gets both earthquakes and tsunamis which could damage the plant and put the surrounding population in jeopardy because of the radioactive material used at the site. They also believe that there will be problems in marketing the fruit outside the state because consumers may not want to buy an irradiated product.

From what you know or what I have told you, how do you feel about the development of an irradiation plant near Hilo? Would you say you are...



- 15a. What are the main reasons why you are opposed to it.

(PROBE) Are there any other reasons?

percentages sum to more than 100 because of multiple responses

radioactivity danger - 65%	better alternatives available - 9%
natural disasters - 27%	other - 2%
fruit isn't safe - 34%	don't know - 1%
don't know enough about radiation - 16%	
fruit not marketable - 11%	base: [369]
health risk to workers - 6%	

- 15b. If you learned that irradiation is ongoing at 40 U.S. plants, and 150 plants worldwide, would that make the project far more acceptable to you, somewhat more acceptable, or would it have no effect on the way you feel about it?

far more		no	don't
<u>acceptable</u>	<u>somewhat</u>	<u>effect</u>	<u>know</u>

base: [369]

3%	16%	79%	2%
----	-----	-----	----

If you learned that familiar products such as Band-Aids, Pampers, spices and other goods are already treated by this method, would that make it ...(READ CATEGORIES)

7%	19%	70%	4%
----	-----	-----	----

If you learned that consumers on the Mainland chose to buy irradiated fruit over other options when it was test marketed there recently, would that make it...(READ CATEGORIES)

3%	22%	73%	1%
----	-----	-----	----

15c. How likely do you think it is that your opinion about the irradiation plant may change in the future, perhaps because you learn more about it. Would you say very likely, somewhat likely, not too likely, or not at all likely?

very likely..... 10%
 somewhat likely..... 43%
 not too likely..... 19%
 not at all likely.....23%
 don't know/depends
 upon information.....5%
 base: [369]

My last few questions are for classification purposes only...

16. Were you born in Hawaii or someplace else?
 (IF LIFETIME RESIDENT, RECORD BELOW. IF NOT, ASK)
 How many years have you lived here?

lifetime resident.....58%
 less than 5 years..... 14%
 5 to 10 years.....7%
 more than 10 years..... 21%

17. What was the last school grade you completed?

some high school or less.....8% college graduate or more.....37%
 high school graduate.....27% refused.....0%
 some college or post h.s. training.....27%

18. Which of the following categories includes your age? (READ LIST)

18 to 24.....11%
 25 to 34.....24%
 35 to 44.....27%
 45 to 54.....11%
 55 or older.....28%
 (refused).....*
 * less than one-half of one percent

19. What is your ethnic background?

Caucasian..... 34%
 Chinese.....5%
 Filipino.....9%
 Hawaiian/part Hawaiian..... 16%
 Japanese..... 24%
 other/mixed..... 11%

20. Are any of your household's wage earners employed in the following industries...?

	<u>yes</u>	<u>no</u>
tourism.....	17%	83%
agriculture.....	9%	91%
land or real estate development.....	7%	93%

not employed in all three industries - 73%

employed in at least one industry - 27%

21. Are you -- or is your household's primary wage earner -- a member of a labor union?

yes.....27%

no.....73%

22. And which of the following categories includes your household income, before taxes, for 1986? That would be the combined income of all wage earners in your home.

Was it ? (READ LIST)

less than \$15,000.....8%

\$15,000 to \$25,000.....19%

\$25,001 to \$35,000.....25%

\$35,001 to \$45,000.....15%

more than \$45,000.....26%

(REFUSED).....7%

Those are all the questions I have, Thank you very much for your help in our research.

23. (RECORD, DO NOT ASK) Sex of respondent.

male.....51%

female.....49%

